Nuclear Safety Standards Committee

42nd Meeting, 29 November – 1 December, 2016

Agenda item 2.1

DS478 - Specific Safety Requirements: Safety of Nuclear Fuel Cycle Facilities, No.SSR-4

R. Gater and A. Shokr
Research Reactor Section
Division of Nuclear Installation Safety
Safety of Fuel Cycle Facilities

• The document (NS-R-5) was first published in 2008

• The current revision (DS 478) was initiated to;
  
  – comply with the long term structure of safety standards approved in 2008

  – ensure coherency and consistency with the other relevant IAEA Safety Standards (e.g. SF-1 and GSRs), and the recently published NPPs documents (SSR-2/1 and SSR-2/2)

  – incorporate experience on application of the documents, and the operating experience feedback from the IAEA Incident reporting systems, and the feedback from the accident at the Fukushima-Daiichi NPP
Overview of the Document

1. The scope remains essentially unchanged from NS-R-5; includes the safety of facilities for SNF and HA waste

2. The new information in DS478 includes
   a) Relevant lessons from the accident at Fukushima Daiichi; Design Extension Conditions, improved regulatory effectiveness, severe accident management, Periodic Safety Review, robust cooling, greater strength / independence at DiD levels 3 and 4, hydrogen control.
   b) Sections “preparation for decommissioning” to replace “decommissioning”, as requested by the safety committees
   c) Interface between safety and security

3. Other Changes
   d) Consistency of “regulatory supervision”, “siting”, “management system” with other revised standards in accordance with committee requests
   e) Stronger requirements for ageing management and on-site material transfers
   f) Material more suitable to guidance removed
   g) References updated
Status of the Document

• The DPP was agreed by the Committees, cleared by NSGC and approved by CSS in April 2014

• The first draft was developed in two CSMs during 2014
  – The first draft was approved by the Committees in November 2014 for submission to MSs for comments
  – Comprehensive review by technical editors
  – Table of resolution of MS comments posted on the website Sept 2016
  – Submission to the Committees after resolution of MS comments at Step 11
  – Approved by RASSC and cleared by NSGC in Nov 2016

• On approval by NUSSC, submission to CSS
### Summary of MS Comments from 2015

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87% of MS comments were accepted and **all were resolved**
Members Comments Rejected

1. Remove requirement for a safety committee;
   a) **Not new.** GSR Part 2 requires independent review before **all** significant safety decisions
   b) Requirement for advisory group or safety committee in NS-R-5 since 2008 and in NS-R-4 since 2005

2. Structure SSR-4 by facility type, like NS-R-5;
   a) New format discussed extensively and agreed with NUSSC and CSS
   b) Most requirements common to all facility types
Ninety-one (91) comments from seven (7) NUSSC members; Canada, ENISSL, France, Iraq, Japan, Korea, UK

- Many comments provided clarification, consistent use of terminology,
- All comments addressed and resolutions incorporated in DS478
- One significant difference of opinion, next slide
- There are no unresolved NUSSC member comments
Consider DEC for existing FCF

1. The long lifetime of NFCF means that many MS performing reassessments on existing facilities.

2. Require consideration of DEC for existing NFCF?
   - France ✔
   - UK ❌

IAEA response;

Requirements for new facilities shall be applied to existing facilities to the extent practicable……
Judgement in Grading

Requirement 11: Use of a graded approach

The use of a graded approach in application of the safety requirements for a nuclear fuel cycle facility shall be commensurate with the potential risk of the facility and shall be based on a safety analysis, expert engineering judgement and regulatory requirements.
Requested Action

Approval by NUSSC for submission to CSS in 2017
Thank you!